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THE HEALTH OF COLLEGE ATHLETES

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HOW do athletics affect the health of college men? Like Banquo's ghost this question will not down, notwithstanding the publication from time to time of convincing testimony from authoritative sources. Although the appearance and action of the college athlete in training proclaim vigorous health, there are people who believe that the strenuous exercise in which he engages saps his vitality and shortens his life. Let us see if this is so.

In 1904 Dr. Geo. L. Meylan, of Columbia University, published in the *Harvard Graduates' Magazine* the results of an exhaustive investigation of the effects of rowing upon Harvard crews from 1852 to 1892 inclusive.

Rowing was selected because it is the most strenuous of all sports and for that reason is said to overtax the heart and kidneys more than any other.

The investigation was conducted in the most thorough manner, Dr. Meylan personally examining a large number of the men, and where that was impossible, securing a report from the oarsman's family physician. The testimony was taken ten years or more after the men had quit rowing "in order that the after effects, good or bad, should have had a chance to show themselves."

There were 152 men on Harvard crews from 1852 to 1892, of whom 123 were living in 1902. Six of those deceased were killed in the civil war, two died through accidents. Dr. Meylan secured data from 106 of the survivors. He found:

First, that these men exceeded the expectation of life as tabulated by the American table of mortality "1.06 years for each man, including those who were killed," and 5.39 years per man "if the life expectation of the latter were added."

Second, that only two of the 152 oarsmen had died of heart disease and one of consumption.

Third, that "eighty of these men became successful professional and business men" and "twenty others men of national and international reputation," that, whereas the percentage of college graduates who earn a place in "Who's Who" is 2.1 per cent., and that of Phi Beta Kappa men 5.9 per cent., of the living oarsmen 8.3 per cent. were placed in this book. (The charge that athletics unfit a man for intellectual activity does not appear to have much force in the face of such evidence.)

Fourth, that but two of the men considered themselves in poor health at the time of the investigation, one of these 57 and the other 66 years of age.

Fifth, that but two of the men believed rowing to have had an injurious effect on their health in after life.

Sixth, that out of 35 men who were examined for life insurance, only one was rejected; that "94 per cent. of the oarsmen were, as far as they knew, free from any affection of heart, stomach or kidneys" eleven years or more after they quit rowing; that "over 97 per cent. appeared to be in good health when seen by him"; that "over 37 per cent. have not consulted a physician for more than ten years; over 50 per cent. have not been sick in bed for one week since leaving college and 37 per cent. have been sick only once during that time."

His conclusions, amply justified by the evidence, were, that "college athletes do not die young of heart disease or consumption, as is so often asserted; that the hard training and racing does not dull the mind and exhaust the mental and physical energy of the oarsmen; that the health and vigor of the oarsmen is so far above the average that if rowing has any effect on the health, the effect can not be otherwise than beneficial."

I now invite attention to data obtained by Dr. Wm. G. Anderson, of Yale University, in a study of 807 Yale athletes who won the coveted "Y" in crew, football, track and baseball between the years of 1855 and 1895. Of these 807 men, who underwent the severest kind of training, only four died of heart disease. Four men out of 807 in half a century. And two of these were 68 and 70 years old!

Dr. Anderson states that during these years there were 10,922 students in the Academic and Sheffield classes at Yale, with 1,406 deaths, or 12.9 per cent. The percentage of deaths among the athletes was 7.2 per cent. Granted that the athlete is an exceptional man physically, the discrepancy is too great to be thus explained away.

Statistics like the above carry weight. They can not be ignored. They are worth reams of argument based on limited data. They justify Dr. Anderson's conclusion that "compared with the Select Mortality Tables of the Actuarial Society, which are made up from the mortality averages of thousands of lives all over the country, the Yale athletes show remarkable longevity" and "judging from the investigations it is reasonable to say that there is no undue strain put on the athletes while they are in training and their later history seems to show that they were benefited rather than harmed. Proof is conclusive that high Yale athletes do not die young and that heart disease is not a chief cause of death."

Some years ago the writer investigated the effect of Distance Running upon college men, consulting athletes from all parts of the country, men who had quit running years before, and who had had time to note in their own persons the after effect of their training and racing.

There were only three cases of permanent injury among 167 men—functional heart trouble which manifested itself during unusual exertion. Ninety per cent. of the men claimed to have derived permanent benefit, in many instances of inestimable value, from their training. In general they declared this benefit to be in the nature of increased vital and constitutional strength. Many were emphatic in their statements, for example:

> My father, who is sixty-two years of age, and an old distance runner, can now run a quarter mile consistently under sixty seconds. He has not been ill since he was a young man, and is as hale and hearty as a man of thirty.

A famous distance runner writes:

> I have been running for over twenty years now, and feel in perfect physical condition. Have won races from seventy-five yards up, and have run over one hundred miles quite often. My heart has been examined by specialists in London, Paris, Boston and other places, and all say it is in perfect working shape.

Another man writes:

> Cornell University is distinguished above all other institutions for the development of runners at the distances you mention. I am in touch with all the 'varsity distance men graduated in the last ten years, and there is not a case of physical debility in the whole lot. Most of them are much more alive than the average man.

Of especial bearing on the inquiry we are pursuing is the fact that 112 of the athletes broke training abruptly, to enter mercantile or other pursuits which afforded no opportunity for indulgence in athletics, yet all but one were in perfect health years after. These men experienced none of the tissue degeneration or functional disorders which are supposed to follow the exceptional development of heart and lungs resulting from athletics. One is forced to conclude that degenerative changes of tissue do not follow. When they occur in an athlete I venture to assert that investigation will show them to have been induced by bad habits, dissipation or close confinement. I have a case in mind now, an athlete of national reputation who drank himself to death at an early age.

I have just finished analyzing data obtained from daily records for ten weeks of men on the Allegheny College basketball team, champions of Western Pennsylvania in 1915–16. There was nothing revealed by the statistics, nor anything in the appearance or actions of the men, to indicate that the strain was greater than they were able to bear without injury. Evidently it was not, as three of the quintet recently passed rigid physical examinations for commissions in the army, and the remaining two are still in college on the team, all five in perfect health to-day.

Baseball so obviously improves the health of the men who play that investigation is superfluous and football is technically perfect as a physical exercise—it is played in the open, under the stimulating influence of sunshine and fresh air; periods of strenuous activity alternate with long periods of comparative repose; it develops strength, speed and agility; it builds up the red corpuscles and enriches the blood; it tones the muscles and fortifies against disease, for "a healthy muscle cell is immune to the attacks of disease-bearing germs." For the past twenty years my football teams have averaged a net gain of five pounds a man during the season and occasionally individuals gain eight to ten pounds. Weight is an index of condition. Trainers do not worry when an athlete holds his weight. But when he begins to lose weight and does not "come back," they handle him carefully, for they know that he is "feeding on himself" and liable to go stale or to "crack" in a hard race.

For years I have been impressed by the appearance of football men as they drop in occasionally to see me after the close of the season. They fairly bloom with health and vigor—the clear eye, ruddy complexion and elastic tread proclaim it from the housetops.

That strenuous exercise has a beneficial rather than an injurious effect upon the organism is further indicated by statistics concerning the jinrickisha man of Japan. He performs infinitely harder work than the college athlete, "is subjected to all kinds of temperature, drenched in perspiration one hour, shivering with cold the next, hauling his ricksha in all kinds of weather," inadequately fed, smokes and dissipates, yet Mr. E. G. Babbitt, American vice-consul at Yokohama, wrote me that in 1907 there were in Tokio alone more than twelve hundred men over fifty-five years of age (in active service) and that most of them were healthy and strong.

The data which have been given shows that an overwhelming majority of college athletes derive substantial benefit from their participation in college sports and that the percentage of serious injuries is small. There is ample corroborative evidence. For nearly twenty-five years the writer has been in intimate personal association with school, college and university athletes. Some thousands of men and boys have been under his control, in all branches of sport. In all these years, among all those boys and men, I recall but two who to my personal knowledge were permanently injured, and there is every reason to believe that in them athletics aggravated, but did not originate, the diseases from which they suffered. My experience is not unique in this respect: it is that of almost all men who direct college athletics—I have questioned many. Injury that handicaps the career of the athlete, that saps vitality or produces organic lesion is extremely rare. I have never met an athlete who would admit that he had been injured by athletics. I have never met a middle aged or elderly man who said so. On the contrary, I have met many who attributed their health through exacting business or professional duties to the stamina stored up on the athletic field. I hear occasionally of men who have injured themselves by over-indulgence in athletics and though hearsay evidence is unreliable I am confident there are such, for there are always men who overdo in activities which interest them, be it in athletics, in business, or in other pursuits. But there must be comparatively few, or one who has been in touch with athletes and ex-athletes for as many years as I have, would have met more of them.

There is no doubt in my mind as to the effects of athletics upon college men—I have seen too many strengthened in heart, lung and muscle; too many developed into splendid specimens of physical manhood, to doubt. They induce good habits of living: regular hours, cleanliness, systematic care of the body —habits which promote health and which become second nature. They tone and strengthen the entire physical organism—the lungs expand more deeply, inhaling a greater volume of pure air and expelling residual air that lurks in remote cells like stale atmosphere in a poorly ventilated room; the heart speeds up, sending the blood swirling through vein and artery to bring fresh nutriment to bone, muscle and sinew, to sweep up fragments of wornout tissue and bear them to the excretory organs; the skin exudes effete matter; the digestive and assimilative systems open wide the throttle and signal full speed ahead; liver, kidneys, and stomach take up the refrain, until the remotest cell in the organism feels the surge and drive of a mighty, vivifying impulse. The athlete knows real health, tastes the heady flavor of perfect physical condition. His nerves tingle with energy, his muscles with vigor. Day by day he builds his body anew. It becomes a beautifully coordinated neuromuscular machine, endowed with vigor and energy far beyond the ordinary and built to endure.